

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ichiro TAKEI et al.

Appl. No : Not Yet Assigned (National Stage of PCT/JP2004/000501)

I.A. Filed : January 21, 2004

For : MEDIA DATA TRANSMISSION APPARATUS AND MEDIA
DATA RECEPTION APPARATUS

**COVER LETTER
SUBMITTING AMENDED PAGES OF APPLICATION**

Commissioner of Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop _____
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

Enclosed please find a copy of the replacement pages 80 - 84 which were filed as an Article 19 Amendment in the International Application on September 2, 2004. Also included is a Statement Under PCT Article 19(1).


Based upon the submission of Amended Claims, Applicants respectfully requests examination on the merits of the application containing claims 1 - 15, in place of originally filed claims 1-15 appearing in International Application No. PCT/JP2004/000501 as originally filed.

REMARKS

Entry of the foregoing amendments to the claims is respectfully requested prior to examination and calculation of the filing fees in the above-identified patent application.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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CLAIMS

1. A media data transmission apparatus comprising:
a storage that stores content comprised of first data and second data;

a transmission manager which acquires the first data and the second data from the storage, and sets a shorter transmission cycle on the first data than a transmission cycle on the second data; and

a transmitter that transmits the first data and the second data separately and repeatedly using the set transmission cycles,

wherein the first data is high-necessity data with a high degree of necessity, while the second data is low-necessity data with a low degree of necessity as compared to the high-necessity data.

2. (Revised) The media data transmission apparatus according to claim 1, wherein the transmission manager determines at least one of the transmission cycle of the first data and the transmission cycle of the second data based on a size of an area to which the first data is distributed or a size of an area to which the second data is distributed.

3. The media data transmission apparatus according to claim 1, wherein the second data has a larger information amount than that of the first data.

4. The media data transmission apparatus according to claim 1, wherein the first data is data of summary

information of the content, while the second data is data of detailed information of the content.

5. (Revised) The media data transmission apparatus according to claim 4, further comprising an electronic signature assigner that assigns an electronic signature to the data of the detailed information and to the data of the summary information, wherein the transmission manager transmits a public key certificate of the electronic signature of the data of the detailed information and the electronic signature of the data of the summary information, said public key added to program information including information that indicates a reception port that receives the data of the detailed information and the data of the summary information and transmitted.

6. (Revised) The media data transmission apparatus according to claim 1, wherein said electronic signature assigner assigns an identifier that associates the high-necessity data with the low-necessity data.

7. The media data transmission apparatus according to claim 2, wherein the first data is detailed map data of a transmission destination area, while the low-necessity data is rough map data of an area adjacent to the transmission destination area.

8. A media data reception apparatus comprising:
a transmitter that receives the first data and the second data transmitted from the media data transmission

apparatus according to claim 1;

a storage manager that associates the first data received and the second data received with each other to store; and

an executor that executes predetermined processing using the second data and the first data associated with the second data.

9. (Revised) The media data reception apparatus according to claim 8, wherein said transmitter halts receiving the first data or the second data, when said transmitter receives the first data or the second data.

10. (Revised) The media data reception apparatus according to claim 9, wherein said executor notifies a operation which halts receiving the first data or the second data to a user, after said transmitter halts receiving the first data or the second data.

11. (Revised) A media data reception apparatus comprising:

a transmitter that receives the data of the summary information, the data of the detailed information and the public key certificate transmitted from the media data transmission apparatus according to claim 5; and

an authentication section that acquires the electronic signature from the data of the detailed information and from the data of the summary information, checks whether the data of the detailed information is tampered with using the public key certificate and the electronic signature acquired from

the data of the detailed information, and checks whether the data of the summary information is not tempered with using the public key certificate and the electronic signature acquired from the data of the summary information.

12. A media data reception method, comprising:

receiving the first data and the second data separately transmitted from the media data transmission apparatus according to claim 1;

associating the first data received and the second data received with each other to store; and

performing predetermined processing using the second data and the first data associated with the second data.

13. A media data reception method according to claim 12, wherein when the first data or the second data is received, operation is halted for receiving the first data or the second data.

14. The media data reception method according to claim 13, wherein after halting the operation for receiving the first data or the second data, the halt of the operation for receiving is notified to a user.

15. A content distribution system comprising:

a media data transmission apparatus having:

a storage that stores content comprised of first data and second data;

a transmission manager which acquires the first data and the second data, and sets a shorter transmission

cycle of the first data than a transmission cycle on the second data; and

a transmitter that transmits the first data and the second data separately and repeatedly using the set transmission cycles,

and a media data reception apparatus having:

a transmitter that receives the first data and the second data transmitted from the media data transmission apparatus;

a storage manager that associates the first data received and the second data received with each other to store; and

an executor that executes predetermined processing using the second data and the first data associated with the second data,

wherein the first data is high-necessity data with a high degree of necessity, while the second data is low-necessity data with a low degree of necessity as compared to the high-necessity data.

Statement under PCT Article 19(1)

The present invention changes the transmission cycle of data according to the degree of necessity of the data. To be specific, the transmission cycle of data of a high degree of necessity is set shorter than the transmission cycle of data of a low degree of necessity.

As a result, it is possible to use the limited transmission band efficiently and transmit the data of high necessity to the receiving terminal quickly.

Reference D1 discloses categorizing data according to the frequency of updating and the level of emergency and transmitting the data of individual categories at different timings.

Reference D2 discloses dividing single data into a plurality of parts and sending the multiple parts at different transmission rates. However, reference D2 discloses changing the transmission rates of the multiple parts according to the order the data is processed, not according to the degree of necessity. In reference D2, for example, with video, the transmission rate is set high early in a scene and set lower towards the end of the scene.

References D1 and D2 do not disclose changing the transmission cycle of data according to the degree of necessity of the data and do not anticipate the present invention.